

What is claimed is:

1. A use as a non-linear capacitor of an electronic device including first, second and third conductor layers respectively arranged as the source, drain and gate electrodes of a field effect transistor, the third conductor layer being capacitively coupled with both the first and second conductor layers, wherein the use includes applying an alternating voltage across the third conductor layer and either of the first and second conductor layers whilst leaving the other of the first and second conductor layers at a floating potential.
2. A use according to claim 1 wherein the third conductor layer is capacitively coupled with the second conductor layer to a greater degree than with the first conductor layer, and wherein an alternating voltage is applied across the first and third conductor layers whilst leaving the second conductor layer at a floating potential.
3. An electronic device including first, second and third conductor layers respectively arranged as the source, drain and gate electrodes of a field effect transistor, the third conductor layer being capacitively coupled with both the first and second conductor layers but with the second conductor layer to a greater degree than with the first conductor layer, wherein the electronic device is operable as a non-linear capacitor by applying an alternating voltage across the third conductor layer and the first conductor layer whilst leaving the second conductor layer at a floating potential.
4. A use in a circuit for signal mixing of an electronic device including first, second and third conductor layers arranged as the drain, source and gate electrodes of a field effect transistor, the third conductor layer being capacitively coupled with both the first and second conductor layers, wherein the use includes applying an alternating signal voltage across the third conductor layer and either of the first and second conductor layers whilst leaving the other of the first and second conductor layers at a floating potential.

5. A use according to claim 1, wherein at least one of the first, second and third conductor layers or any of the other layers constituting the field effect transistor is deposited by solution processing.
6. A use according to claim 1, wherein the semiconducting layer of the field-effect transistor is a molecular organic semiconductor.
7. A use according to claim 1, wherein the semiconducting layer of the field-effect transistor is a conjugated polymer semiconductor.
8. An electronic device including a first pair of capacitively coupled first and second conductor layers and a second pair of capacitively coupled third and fourth conductor layers, wherein the first and third conductor layers and the second and fourth conductor layers are arranged as the drain and source electrodes of respective field effect transistors together with one or more gate electrodes conductively connected to either of the first and second conductor layers, wherein the electronic device is operable as a non-linear capacitor by applying an alternating voltage across the first and second conductor layers whilst leaving the third and fourth conductor layers at a floating potential.
9. An electronic device according to claim 8, wherein the first, second, third and fourth conductor layers and the one or more gate electrodes are provided on a total of two levels.
10. A use as a non-linear capacitor of a device according to claim 8, wherein an alternating voltage is applied across the first and second conductor layers whilst leaving the third and fourth conductor layers at a floating potential.
11. A circuit for signal mixing including an electronic device according to claim 8.

12. A device according to claim 3, wherein at least one of the first, second and third conductor layers or any of the other layers constituting the field effect transistor is deposited by solution processing.
13. A device according to claim 3, wherein the semiconducting layer of the field-effect transistor is a molecular organic semiconductor.
14. A device according to claim 3, wherein the semiconducting layer of the field-effect transistor is a conjugated polymer semiconductor.
15. A use according to claim 4, wherein at least one of the first, second and third conductor layers or any of the other layers constituting the field effect transistor is deposited by solution processing.
16. A use according to claim 4, wherein the semiconducting layer of the field-effect transistor is a molecular organic semiconductor.
17. A use according to claim 4, wherein the semiconducting layer of the field-effect transistor is a conjugated polymer semiconductor.